AMENDMENT NO. 2 MARCH 2021

TO

IS 2553 (PART 2) : 2019 SAFETY GLASS — SPECIFICATIONS

PART 2 FOR ROAD TRANSPORT

(First Revision)

(*Page* 3*, clause* **4.1.1.1**) — Insert the following at the end:

‘NOTE — The above requirement does not apply for markings other than **4.1.2**’.

(*Page* 3, *clause* **4.1.2.1**) — ‘Substitute the following for the existing clause:

4.1.2.1 Identification marks for windscreens

4.1.2.1.1 “II” for laminated-glass.

4.1.2.1.2 “IV” for glass-plastics.

4.1.2.1.3 “I” for toughened glass for agricultural tractors

4.1.2.1.4 “VII” In the case of uniformly-toughened glass glazing which can be used as windscreens for Agricultural Tractor vehicles which, by construction, cannot exceed 40 km/h’.

(*Page* 3, *clause* **5**) — Substitute the following for the existing clause:

‘5 PERFORMANCE REQUIREMENTS

Summary of performance requirements is given in Table 1. For agricultural tractor, summary of performance test requirement given in Table 1-A ‘.

(*Page* 3, *clause* **5.1**) — Substitute the following title of *clause* **5.1** for the existing title:

5.1 Requirements applicable to glazing as per Table 1 and 1 A

(*Page* 4*, Table* 1) — Substitute the following for resistance to fire, resistance to chemical, flexibility and fold, Weathering and 227 g ball:

	Windscreens			Panes							
	Laminated Glass		Glass Plastics	Uniformly Toughened Glass		Laminated Glass		Double Glazed Unit1)	Glass Plastics	Rigid Plastic	Flexible Plastic
Marking	II	II/P	IV		P	XI	XI/P	VI	XII	VIII	IX
Resistance to fire		5.2.2	5.2.2		5.2.2		5.2.2		5.2.2		
Resistance to chemical		5.2.3	5.2.3		5.2.3		5.2.3		5.2.3		
227 g Ball	5.4.5	5.4.5	5.4.5	5.5.1.2	5.5.1.2	5.5.1.2	5.5.2.1.	5.5.2.1.	5.5.2.1.	5.6.2	5.7.1 & 5.7.2
Flexibility and fold										5.6.3	5.7.3
Weathering										5.6.4	5.7.4

Price Group 6

(*Page* 4) Add following *Table* 1-A below *Table* 1

Table 1-A Summary of Performance Requirements for Agricultural Tractor

(*Clause* 5)

	Windscreen						Panes							
	Laminated Glass		Glass Plastics	Toughened glass		Uniform Toughen glass	Uniform Toughen glass		Laminated Glass		Double Glazed unit	Glass Plastics	Rigid Plastic	Flexible Plastic
Marking	II	II/P	IV	I	I/P	VII		P	XI	XI/P	VI	XII	VIII	IX
Light transmittance	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1
Resistance to abrasion	5.1.2	5.1.2	5.1.2					5.1.2	5.1.2	5.1.2		5.1.2	5.1.2	
Resistance to temperature changes		5.2.1	5.2.1		5.2.1			5.2.1		5.2.1		5.2.1		
Resistance to fire		5.2.2	5.2.2		5.2.2			5.2.2		5.2.2		5.2.2	5.2.2	5.2.2
Resistance to chemicals		5.2.3	5.2.3		5.2.3			5.2.3		5.2.3		5.2.3	5.2.3	5.2.3
Resistance to radiation	5.3.1	5.3.1	5.3.1		5.3.1			5.3.1	5.3.1	5.3.1		5.3.1		
Resistance to high temperature	5.3.2	5.3.2	5.3.2					5.3.2	5.3.2	5.3.2		5.3.2		
Resistance to humidity	5.3.3	5.3.3	5.3.3		5.3.3			5.3.3	5.3.3	5.3.3		5.3.3	5.3.3	
Optical distortion	5.4.1	5.4.1	5.4.1	5.4.1	5.4.1	5.4.1								
Image separation	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2								
Fragmentation				5.8.2	5.8.2	5.5.1.1	5.5.1.1	5.5.1.1						
Head-form	5.4.3	5.4.3	5.4.3	5.8.3	5.8.3						5.5.3.2		5.6.1	
2.260 g Ball	5.4.4	5.4.4	5.4.4											
227 g Ball	5.4.5	5.4.5	5.4.5			5.5.1.2	5.5.1.2	5.5.1.2	5.5.1.2	5.5.1.2		5.5.1.2	5.6.2	5.7.1& 5.7.2
Flexibility and fold													5.6.3	5.7.3
Weathering													5.6.4	5.7.4
Cross-cut													5.6.5	

(*Page* 5) — Substitute existing *clause* **5.4.1.1** and Table below it by following *clause* **5.4.1.1** and *Table*)

5.4.1.1 No measurements shall be made in a peripheral area 25 mm inboard of the design glass outline and of any opaque obscuration, provided that it does not impinge into the extended Zone A or Zone I. For agricultural tractors, no measurements shall be made in a peripheral area 100 mm wide.

Vehicle Category	Zone or Test Area	Maximum Values of Optical Distortion
M1 and N (derived from a M1 where the windscreen and seating positions are identical)	A - Extended according to **7.1.3.3.2**. Alternatively, central area as per **7.1.4**	2’ of arc
	B - Reduced according to **7.1.3.3.4**. Alternatively, outer area as per **7.1.4.**	6’ of arc
L Category (with bodywork, at least partially covering the driver)	Primary area as defined in IS 16325 Alternatively, central area as per **7.1.4**	2’ of arc
	Secondary area as defined in IS 16325 Alternatively, outer area as per **7.1.4**	6’ of arc
M2, M3 and N (except those N derived from a M1 where the windscreen and seating position are identical)	I according to **7.1.3.4.2**. Alternatively, Central Area as per **7.1.4**.	2’ of arc
Agricultural Tractor.	I according to **7.1.3.4.2.** Alternatively, Central Area as per **7.1.4**.	2’ of arc
	I’- for which it is not possible to determine zone I, NOTE — Zone I’ consists in the whole surface of the windscreen.	

(*Page* **6**, *Table* below *clause* **5.4.2**) **—** Substitute following table for existing Table:

Vehicle Category	Zone or Test Area	Maximum Values of Optical Distortion
M1 and N (derived from a M1 where the windscreen and seating positions are identical)	A - Extended according to **7.1.3.3.2**. Alternatively, central area as per **7.1.4**	15’ of arc
	B - Reduced according to **7.1.3.3.4**. Alternatively, outer Area as per **7.1.4.**	25’ of arc
L Category (with bodywork, at least partially covering the driver)	Primary area as defined in IS 16325 Alternatively, central area as per **7.1.4**	15’ of arc
	Secondary area as defined in IS 16325 Alternatively, outer area as per **7.1.4**	25’ of arc
M2, M3 and N (except those N derived from a M1 where the windscreen and seating position are identical)	I according to **7.1.3.4.2**. Alternatively, Central Area as per **7.1.4**.	15’ of arc
Agricultural Tractor etc.	I according to **7.1.3.4.2**. Alternatively, Central Area as per **7.1.4**.	15’ of arc
	I’- for which it is not possible to determine zone I, NOTE — Zone I’ consists in the whole surface of the windscreen.	

(Page 6, *clause* **5.4.2.1) —** Substitute the following for the existing clause:

'**5.4.2.1** No measurements shall be made in a peripheral area 25 mm inboard of the design glass outline and of any opaque obscuration, provided that it does not impinge into the extended Zone A or Zone I. For agricultural tractors, no measurements shall be made in a peripheral area 100 mm wide.'

(*Page* 6, *clauses* **5.4.3 – 5.4.3.4.2**) — Substitute the following for the existing clause: Head-form test

NOTES:

1 This test is not applicable for vehicle of 'L' category.

2 Test conducted as per **6.5.2** shall also be acceptable for the compliance to **5.4.3**.

5.4.3.1 *Head-form test on windscreens*

When tested in accordance with **6.5**, at the drop height of 1.5 m + 0 – 5 mm the windscreen shall meet the following requirements.

5.4.3.1.1 The windscreen shall break displaying numerous circular cracks centered approximately on the point of impact, the cracks nearest to the point of impact being not more than 80 mm from it.

5.4.3.1.2 The layers of glass shall remain adhering to the interlayer. One or more partial separations from the interlayer with a distance of less than 4 mm in breadth, on either side of the crack, are allowed outside a circle of 60 mm diameter centered on the point of impact.

5.4.3.1.3 *On the impact side*

5.4.3.1.3.1 The interlayer shall not be laid bare over an area of more than 20 cm^2.

5.4.3.1.3.2 A tear in the interlayer up to a length of 35 mm is allowed.

5.4.3.1.4 *Test pieces*

5.4.3.1.4.1 Eight windscreens shall be tested and at least seven shall meet the requirements.

5.4.3.2 *Head-form test on flat test pieces*

When tested in accordance with **6.5**, at the drop height of 4.0 m +25 – 0 mm, the flat test piece shall meet the following requirements.

5.4.3.2.1 The test piece yields and breaks, displaying numerous circular cracks centered approximately on the point of impact.

5.4.3.2.2 Tears in the interlayer are allowed provided that the manikins head does not pass through the test piece.

5.4.3.2.3 No large fragments of glass shall become detached from the interlayer.

5.4.3.2.4 *Test pieces*

5.4.3.2.4.1 Eight flat test pieces specified at **6.5.5.1** shall be tested and at least seven shall meet the requirements.

(*Page* 7, *clause* **5.4.4**) — Substitute the following for the existing clause:

2260 g Ball Test

When tested in accordance with **6.4**, at the drop height of 4 m +5/-0 mm, the 82 mm ball shall not pass through the glazing within 5 s after the moment of impact.

(*Page* 9*, clause* **5.7.3.1***)* — Insert the following at the end:

'**5.7.4** *Weathering*

5.7.4.1 The test method shall be that mentioned in 6.18. The total ultraviolet radiant exposure with the long arc xenon lamp shall be 500 MJ/m^2. During irradiation, the test pieces shall be exposed to water spray in continuous cycles. During a cycle of 120 min, the test pieces are exposed to light without water spray for 102 min, and to light with water spray for 18 min.

5.7.4.2 Other methods giving equivalent results shall be allowed.

5.7.4.3 Number of test pieces Three flat pieces 130 mm × 40 mm cut from a flat sheet sample shall be subjected to testing.

5.7.4.4 *Interpretation of results*

The resistance to the simulated weathering shall be considered to have given a satisfactory result if:

a) The light transmittance measured in accordance with 6.1 does not fall below 95 percent of the pre-weathering value. Additionally, for windows which are required for driver visibility, the value shall not fall below 70 percent.

b) No bubbles or other visible decompositions, discolourations, milkiness or crazing shall occur during weathering.

c) A set of test pieces or samples submitted for approval shall be considered satisfactory from the point of view of the resistance to simulated weathering if one of the following conditions is met.

d) All test pieces have given a satisfactory result.

e) One test piece having given an unsatisfactory result, a further series of tests carried out on a new set of test pieces or samples gives satisfactory results.

(*Page* 9) **—** Add following **5.8** after **5.7**

5.8 Requirements Specific to Toughened glass windscreens for Agricultural Tractor

5.8.1 Type of glazing for Agricultural Tractor shall be as defined in clause **3.23** of this standard

5.8.2 *Fragmentation Test*

5.8.2.1 The fragmentation tests shall be repeated on transition from polished (plate) glass to float glass or sheet glass, and vice versa.

5.8.2.2 Number of test pieces: Six test pieces shall be tested. One test piece for each impact point mentioned in Fig. 41.

5.8.2.3 *Different zones of glass*

A toughened-glass windscreen shall comprise two main zones, FI and FII. It may also comprise

An intermediate zone, FIII. These zones are as defined below.

5.8.2.3.1 Zone FI: Peripheral zone of fine fragmentation, at least 7 cm wide, all round the edge of the windscreen and including an outer strip 2 cm wide not subjected to assessment;

5.8.2.3.2 Zone FII: Visibility zone of varying fragmentation, always including a rectangular part at least 20 cm high and 50 m long;

5.8.2.3.2.1 For agricultural the position of the visibility zone shall be indicated in the test report.

5.8.2.3.2.2 The height of the above rectangle may be reduced to 15 cm for windscreens which are less than 44 cm high.

5.8.2.3.3 Zone FIII: Intermediate zone, not more than 5 cm wide, between zones FI and FII.

5.8.2.4 *Test method*

The method used shall be that described in **6.2.1, 6.2.2.1, 6.2.2.2 and 6.2.2.4**.

5.8.2.5 Points of impact (*see* Fig. 41)

5.8.2.5.1 The points of impact shall be selected as follows:

Point 1: in the central part of zone FII in an area of high or low stress,

Point 2: in zone FIII, as near as possible to the vertical plane of symmetry of zone FII,

Points 3 and 3’: 3 cm from the edges of one median of the test piece; when there is a tong mark, one of the breakage points shall be near the edge bearing the tong mark and the other near the opposite edge, Point 4: at the place where the radius of curvature is smallest on the longest median,

Point 5: 3 cm from the edge of the test piece at the place where the radius of curvature of the edge is smallest, either to the left or to the right.

5.8.2.5.2 A fragmentation test shall be performed at each of the points 1, 2, 3, 3', 4 and 5.

5.8.2.6 *Interpretation of results*

5.8.2.6.1 A test shall be deemed to have given a satisfactory result if fragmentation satisfies all the conditions given in paragraphs **5.8.2.6.1.1**, **5.8.2.6.1.2** and **5.8.2.6.1.3** below:

5.8.2.6.1.1 Zone FI:

5.8.2.6.1.1.1 The number of fragments in any 5 cm x 5 cm square is not less than 40 nor more than 350; however in the case of a count of less than 40, if the number of fragments in any 10 cm x 10 cm square containing the 5 cm × 5 cm square is not less than 160, this shall be acceptable.

5.8.2.6.1.1.2 For the purposes of the above rule, a fragment extending across a side of a square shall count as half a fragment.

5.8.2.6.1.1.3 Fragmentation shall not be checked in a strip 2 cm wide round the edge of the samples, this strip representing the frame of the glass, nor within a radius of 7.5 cm from the point of impact.

5.8.2.6.1.1.4 A maximum of 3 fragments of an area exceeding 3 cm^2 shall be allowed. No two of these fragments shall be contained within the same 10 cm diameter circle.

5.8.2.6.1.1.5 Elongated fragments may be permitted provided that their ends are not knife- edged and that their length does not exceed 7.5 cm, except in the case provided for in paragraph **5.8.2.6.2.2** below. If these elongated fragments extend to the edge of the glass, they shall not form an angle of more than 45° with it.

5.8.2.6.1.2 Zone FII:

5.8.2.6.1.2.1 The residual visibility after shattering shall be checked in the rectangular area defined in paragraph **5.8.2.3.2** above. In that rectangle the aggregate surface area of the fragments of more than 2 cm^2 shall represent not less than 15 percent of the area of the rectangle; however, in the case of windscreens less than 44 cm high, or whose angle of installation is less than 15° from the vertical, the visibility percentage shall at least be equal to 10 per cent of the surface of the corresponding rectangle.

5.8.2.6.1.2.2 No fragment shall have an area of more than 16 cm^2 except in the case provided for in paragraph **5.8.2.6.2.2** below.

5.8.2.6.1.2.3 within a radius of 10 cm from the point of impact, but only in that part of the circle which is included in Zone FII, three fragments having an area of more than 16 cm^2 but less than 25 cm^2 shall be allowed.

5.8.2.6.1.2.4 Fragments shall be substantially regular in shape and free from points of the type described in paragraph **5.8.2.6.1.2.4.**1 below. However, not more than 10 irregular fragments shall be allowed in any 50 x 20 cm rectangle and not more than 25 over the whole surface of the windscreen. No such fragment shall present a point more than 35 mm long measured in accordance with paragraph **5.8.2.6.1.2.4.1** below.

5.8.2.6.1.2.4.1 A fragment shall be considered as an irregular fragment if it cannot be inscribed in a circle of 40 mm in diameter, if it has at least one point more than 15 mm long when measured from the top of the point to the section whose width is equal to the glazing thickness, and if it has one or more points having a top angle smaller than 40°.

5.8.2.6.1.2.5 Fragments of elongated shape shall be allowed in Zone FII as a whole, provided they do not exceed 10 cm in length, except in the case provided for in paragraph **5.8.2.6.2.2** below.

5.8.2.6.1.3 Zone FIII Fragmentation in this zone shall have characteristics intermediate between those of the fragmentation respectively allowed for the two neighboring zones (FI and FII).

5.8.2.6.2 A windscreen submitted for approval shall be considered satisfactory from the point of view of fragmentation if at least one of the following conditions is fulfilled:

5.8.2.6.2.1 When all the tests carried out using the points of impact defined in paragraph **5.8.2.5.1** above have given a satisfactory result;

5.8.2.6.2.2 When one test among all those carried out using the points of impact prescribed in paragraph **5.8.2.5.1** has given an unsatisfactory result, taking account of deviations which do not exceed the following limits:

Zone FI: not more than five fragments between 7.5 and 15 cm long,

Zone FII: not more than three fragments of between 16 and 20 cm^2 in area located outside the circle having a radius of 10 cm centred on the point of impact,

Zone FIII: not more than four fragments between 10 and 17.5 cm long and is repeated on a new sample, which either conforms to the requirements of paragraph 5.8.2.6.1 or presents deviations within the above specified limits.

5.8.2.6.2.3 When two tests among all the tests carried out using the points of impact prescribed in paragraph **5.8.2.5.1** have given an unsatisfactory result for deviations not exceeding the limits specified in paragraph **5.8.2.6.2.2,** and a further series of tests carried out on a new set of samples conforms to the requirements of paragraph **5.8.2.6.1**, or not more than two samples of the new set present deviations within the above specified limits of paragraph **5.8.2.6.2.2.**

5.8.2.6.3 If the above-mentioned deviations are found, they shall be noted in the test report and permanent recording(s) of the fragmentation pattern of the relevant parts of the windscreen shall be attached to the report.

5.8.3 *Headform Test*

5.8.3.1 *Number of test pieces*

5.8.3.1.1 Four Actual Windscreen shall be tested.

5.8.3.1.2 Alternatively, at the discretion of the laboratory conducting the tests, for each category of windscreen thickness, six test pieces of the dimension (1,100 mm x 500 mm) +5/-2 mm shall be subjected to testing.

5.8.3.2 *Test method*

5.8.3.2.1 The method used shall be that described in **6.5.3**

5.8.3.2.2 The height of drop shall be 1.5 m +0/-5 mm.

5.8.3.3 *Interpretation of results*

5.8.3.3.1 The test shall be deemed to have given a satisfactory result if the windscreen or the test piece is fractured.

5.8.3.3.2 A set of test pieces submitted for approval shall be considered satisfactory from the point of view of the headform test if either of the two following conditions is fulfilled, that is to say if:

5.8.3.3.2.1 All the tests have given a satisfactory result;

5.8.3.3.2.2 One test having given an unsatisfactory result, a further series of tests carried out on a new set of test pieces has given satisfactory results.

(*Page* 10, *clause* **6.2.3**) — Substitute the following for the existing clause:

Points of impact for uniformly toughened glass panes are as follows, and represented in **7.2** (*see* Fig. 40).

(*Page* 10, *clause* **6.3.2.1**) — Substitute the following for the existing clause:

Condition the test piece at the temperature specified in 6.1 for at least 4 h immediately preceding the test. In the case of laminated-glass and glass plastic windscreens the temperatures will be as specified in **6.3.3.4**.

(*Page* 11, *clause* **6.4**) — Substitute the following for the existing clause:

2260 g Ball Test

(*Page* 11, *clause* **6.4.2.1**) — Substitute the following for the existing clause:

Condition the test piece at the temperature specified in **6.1** for at least 4 h immediately preceding the test.

(*Page* **11**, *Table* 2) — Substitute the following for the existing clause:

Drop height and the mass of detached fragments (**6.3.3.4**)

Nominal thickness of test pieces	+40 ± 2°C		-20 ± 2°C	
	Height of Fall	Maximum Permitted Mass of the Fragments	Height of Fall	Maximum Permitted Mass of the Fragments
mm	m	g	m	g
e ≤ 4.5	9	12	8.5	12
4.5 < e ≤ 5.5	9	15	8.5	15
5.5 < e ≤ 6.5	9	20	8.5	20
e > 6.5	9	25	8.5	25

(*Page* 12, *clause* **6.4.3.2**) — Substitute the following for the existing clause:

The drop height shall be 4.0 m +5/-0 mm.

(*Page* 13, *clause* **6.5.2.1**) — Substitute the following for the existing clause:

Condition the test piece at the temperature specified in **6.1** for at least 4 h immediately preceding the test.

(*Page* 13, *clause* **6.5.3.1**) — Substitute the following for the existing clause:

Condition the test piece at the temperature specified in **6.1** for at least 4 h immediately preceding the test.

(*Page* 13, *clause* **6.5.4.2**) — Substitute the following for the existing clause:

It shall be 1.5 m +0/-5 mm for tests conducted on windscreens and on flat samples for double glazed units.

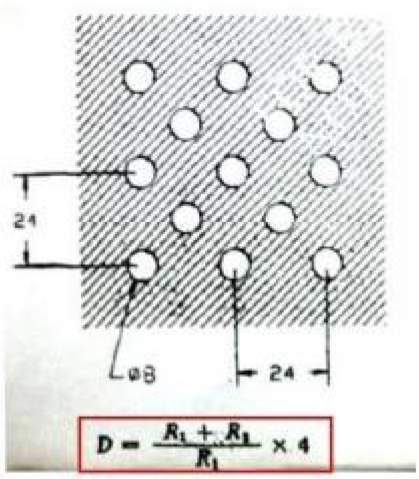
(*Page* 13, *clause* **6.5.5.1**) — Substitute the following for the existing clause:

The test pieces according to **6.5.2** shall be flat samples measuring 1100 mm × 500 mm +10/-2 mm.

(*Page* 15, *clause* **6.6.2.6**) — Substitute Row No. 2 of the table for the existing text:

T2	Yes	No	Yes	Total light transmitted by test piece

(*Page* 21, *Fig.* 12) — Substitute the following figure for the existing figure:



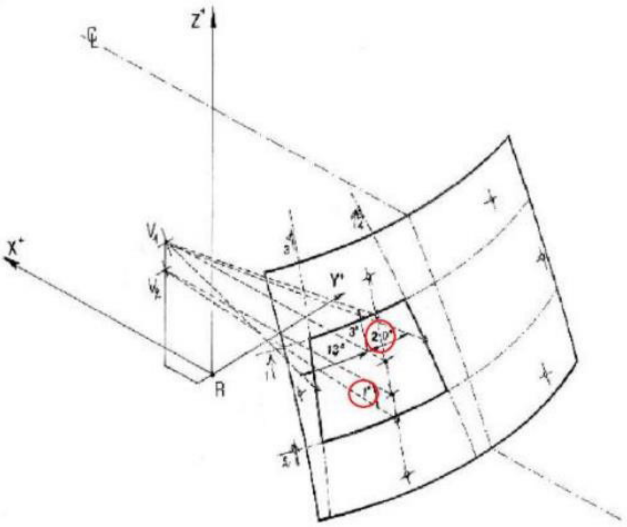
(*Page* 35, *clause* **6.18.1.4**) — Substitute the following for the existing clause:

Measure according to **6.11**, the luminous transmittance of the test specimen(s) to be measured. Measure according to **6.6**, the resistance of abrasion of the surface(s) of the control specimen(s). The face of each test specimen, which would represent the surface glazed to the exterior of the road vehicle, shall face the lamp. Other exposure conditions shall be as follows.

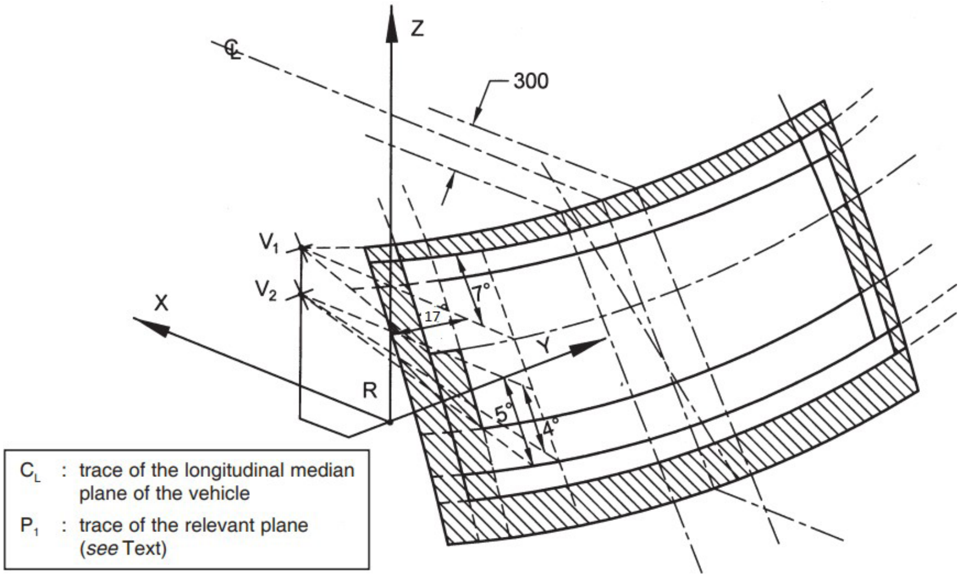
(*Page* 37, *clause* **7.1.1.2**) — Substitute the following for the existing clause:

Table 4 gives the basic co-ordinates for a design seat-back angle of 25°. The positive direction of the co-ordinates is shown in Fig. 35.

(*Page* 39, *Fig.* 32) — Substitute the following figure for the existing figure:

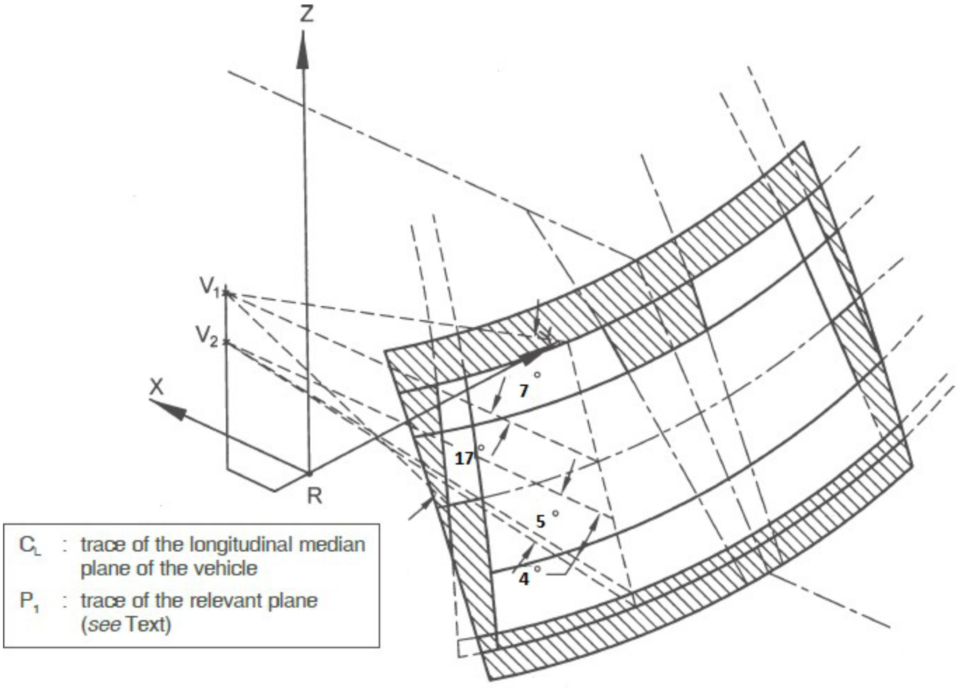


(*Page* 39, *Fig.* 33) — Substitute the following figure for the existing figure:



Z
℄
300
V1
V2
X
17
7°
Y
R
5°
4°
CL : trace of the longitudinal median plane of the vehicle
P1 : trace of the relevant plane (see Text)

(*Page* 40, *Fig.* 34) — Substitute the following figure for the existing figure:


Z
X
V1
V2
R
7°
17°
5°
4°
CL : trace of the longitudinal median plane of the vehicle
P1 : trace of the relevant plane (see Text)

(*Page* 43, *clause* **11.1**) — In table under row heading marking, I to be omitted:

(*Page* 44, *clause* **12.3**) — Substitute the following for the existing clause:

In case of **12.1 (b**), tests for only those parameters which are affected by the modifications need be carried out.

(*Page* 44) — Add following Figure 41 after Fig. 40.

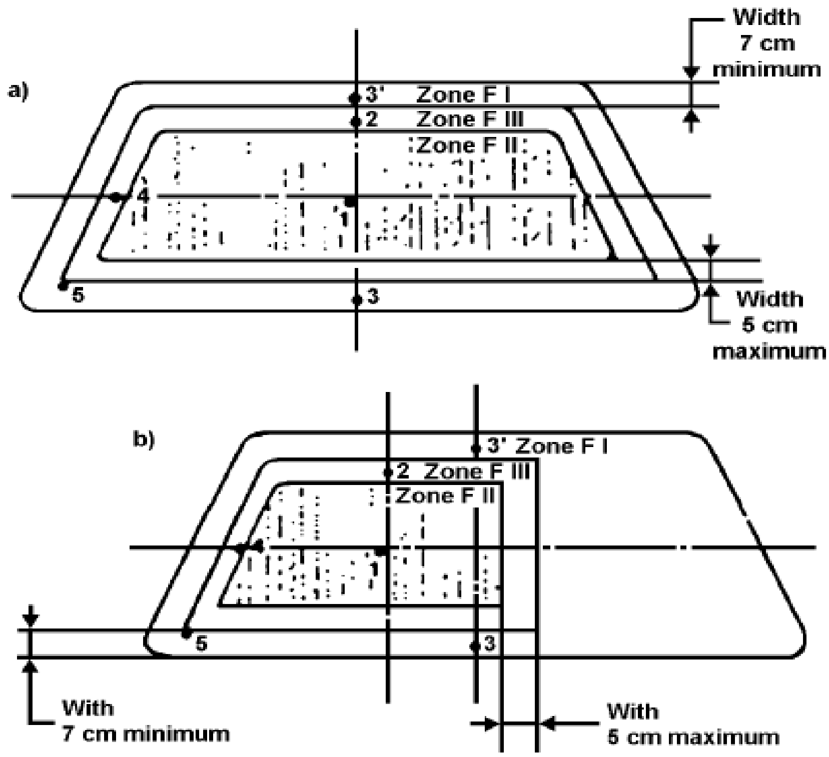


FIG. 41 PRESCRIBED POINTS OF IMPACT FOR WINDSCREEN

(*Page* 45, *clause* **12.3**) — Insert the following after Sl.No. 7 of the Table:

<table>
<tr><th>Sl
No.</th><th>Parameter</th><th>Whether Verification is Required</th></tr>
<tr><td>8
8.1
8.1.1
8.1.2</td><td>Changes in the toughened panes:
For flat toughened glass:
Increase in the developed area
Decrease in the smallest angle between two adjacent sides
<table>
<tr><th>Parameter / Criteria for Extension</th><th>Change in Value</th></tr>
<tr><td>Increase in developed Area (S)</td><td>More than 5%</td></tr>
<tr><td>Decrease in the smallest angle between two adjacent sides (Y)°</td><td>More than 5°</td></tr>
</table></td><td>Fragmentation Test</td></tr>
<tr><td>8.2
8.2.1
8.2.2
8.2.3</td><td>For curved toughened glass:
Increase in the developed area.
Decrease in the smallest angle between two adjacent sides.
Increase in the segment height
<table>
<tr><th>Parameter / Criteria for Extension</th><th>Change in Value</th></tr>
<tr><td>Increase in developed Area (S)</td><td>More than 5 percent</td></tr>
<tr><td>Decrease in the smallest angle between two adjacent sides (Y)°</td><td>More than 5°</td></tr>
<tr><td>Increase in the segment height</td><td>More than 30 mm</td></tr>
</table></td><td>Fragmentation Test</td></tr>
<tr><td>9</td><td>Changes in toughened windscreen</td><td></td></tr>
<tr><td>9.1</td><td>Change in rake angle</td><td>Optical distortion, secondary image and light transmission tests are required</td></tr>
<tr><td>9.2</td><td>Change in colour</td><td>Optical distortion, secondary image and light transmission tests are required</td></tr>
<tr><td>9.3</td><td>
<table>
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</table>

(TED 06)

Publication Unit, BIS, New Delhi, India